

CLAIMS

What is claimed is

1. A diverter valve (10) for selectively controlling the flow of fluid from a fluid source to one of at least two fluid outlets (132, 136), the valve comprising:
 - 5 a housing (12) defining at least one flow passage (54, 64, 66, 68);
 - a first ceramic plate (14) mounted to the housing and fixed against rotation, the first ceramic plate having at least one flow passage (88, 90) in registry with the housing flow passage; and
 - a second ceramic plate (16) rotatably mounted within the housing, the second
 - 10 ceramic plate having at least one flow passage (104, 106, 108, 110, 112) that can be selectively placed into fluid communication with the housing flow passage; the diverter valve characterized by:
 - an accessory case (20) fixedly mounted to the second ceramic plate (16), the accessory case having at least one flow passage (116, 118, 122) in registry with the at
 - 15 least one second ceramic plate flow passage, wherein the at least one flow passage in the accessory case is configured to mount a flow adapter (132, 136).
2. The diverter valve of claim 1 wherein the accessory case (20) is adhered to the second ceramic plate (16).
3. The diverter valve of claim 2 wherein the accessory case (20) is adhered to
- 20 the second ceramic plate (16) by an adhesive.
4. The diverter valve of claim 2 wherein the adhesive is epoxy.
5. The diverter valve of claim 1 wherein the accessory case (20) mounts two flow adapters (132, 136).
6. The diverter valve of claim 5 wherein one flow adapter (132) is for aerated
- 25 flow and a second flow adapter (136) is for stream flow.
7. The diverter valve of claim 1 wherein the flow passages in the housing and the accessory case are configured and oriented to substantially balance hydraulic pressures acting on the ceramic plates.
8. The diverter valve of claim 7 wherein a flow passage (68) in the housing
- 30 (12) is open to and parallel with the first ceramic plate (14) whereby pressure in the flow passage can act against the first ceramic plate to urge it toward the second ceramic plate.
9. The diverter valve of claim 1 further comprising a thrust bearing (28, 30, 161, 178) and a retainer (24), wherein the thrust bearing is disposed between the retainer

and the second ceramic plate, and bears against the second ceramic plate with reduced friction to enable the second ceramic plate to rotate with lower torque.

10. The diverter valve of claim 9 wherein the thrust bearing comprises a wave spring (28) and washer (30).

5 11. The diverter valve of claim 9 wherein the thrust bearing comprises a low friction washer (161).

12. The diverter valve of claim 11 wherein the low friction washer comprises PTFE.

10 13. The diverter valve of claim 9 wherein the thrust bearing is a roller bearing (178).

14. The diverter valve of claim 1 wherein the first ceramic plate (14) is adhered to the housing (12).

15. The diverter valve of claim 1 further comprising at least one ring seal (162, 164, 168) between the first ceramic plate and the housing.

15 16. The diverter valve of claim 15 comprising three ring seals between the first ceramic plate and the housing.

17. The diverter valve of claim 15, wherein the ring seal is seated within a groove (168, 170, 172).

20 18. The diverter valve of claim 17 wherein the groove is a dovetail groove.